

FEB 28 2011**PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

TAKAGUCHI et al

Application No.: 10/573,449 Art Unit: 1793

Filing date: January 19, 2007 Examiner: Megha Mehta

For: WAVE SOLDERING TANK

SUBMISSION OF DECLARATION UNDER 37 CFR 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In support of the amendment filed on February 22, 2011 in connection with the present application, a declaration under 37 CFR 1.132 is attached.

The Official Action of September 22, 2010 in connection with this application contains a number of assertions which express misapprehensions concerning fluid mechanics and the operation of pumps. In the attached declaration, Professor Charles Garris of the Department of Mechanical and Aerospace Engineering at The George Washington University, who is an expert on the design of pumps, comments on those misapprehensions and explains how various factors affect the operation of pumps. Among other

topics, the declaration describes the importance to a pump designer of the viscosity of the working fluid and shows that a pump which is suitable for pumping a fluid of high viscosity can be inappropriate for pumping a fluid having a low viscosity, which means that the characteristics of a first pump intended for handling a certain fluid do not automatically suggest anything about what should be the characteristics of a second pump for handling a different fluid of totally different viscosity. The declaration also discusses the effect of the number of blades of a screw pump and shows that there is no rule that increasing the number of blades of a screw pump necessarily improves the efficiency or performance of the pump.

With a proper appreciation of fluid mechanics and pump operation based on the attached declaration, it will be clear that a person skilled in the art could not reasonably combine the references cited in the most recent Official Action in the manner proposed by the Official Action and that the pending claims are therefore allowable.

Favorable consideration is respectfully requested.

Respectfully submitted,



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